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PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

APPLICANT(S): Bennett et al.

EXAMINER: Cumming, W.

SERIAL NO.: 09/096,560

ART GROUP: 2749

FILED: 6/12/98

Case No.: AMT-9713

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ENTITLED: Home Gateway System for Home Automation and Security

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**APPEAL BRIEF**

Honorable Commissioner of  
Patents and Trademarks  
Washington, D.C. 20231

Sir:

This is an appeal from the final rejection of claims 1-19 of the Office Action dated August 2, 2001. This application was filed on June 12, 1998. Appellant submits this Appeal Brief pursuant to 35 U.S.C. §134 and 37 C.F.R. § 1.192 in furtherance of the Notice of Appeal filed in this case on April 5, 2000. The fees required under 37 C.F.R. §1.17(b) and any other necessary fees as indicated in the accompanying Appeal Brief Transmittal Letter are enclosed

### **I. Real Party In Interest**

The real party in interest is: Ameritech Corporation, a corporation organized and existing under the laws of the state of Delaware, and having a place of business at 2000 West Ameritech Center Drive, Hoffman Estates, Illinois, 60196-1025 See the Assignment recorded at Reel 9402, Frame 0643.

### **II. Related Appeals And Interferences**

There are no appeals or interferences related to the present appeal.

### **III. Status Of Claims**

Claims 1-19 (see Appendix) are pending in this application. Claims 1-19 are rejected and are involved in this appeal.

### **IV. Status Of Amendments**

There have been no amendments filed subsequent to the final rejection of August 2, 2001.

## V. Summary Of The Invention

The invention is an integration of telephony, communication, security and home automation functions into a single, cost effective package. The home gateway system 20 (See Figure 1) has an input to receive a cable television 24 input signal. The home gateway system 20 is also connected by a wireless local loop 26 and a base station 28 to the public switch telephone network (PSTN) 30. The home gateway system 60 has a wireless local loop transceiver 62 (see Figure 2). A home automation controller 64 is capable of sending and receiving messages from the wireless local loop transceiver 62. A home security controller 66 is capable of sending and receiving messages from the wireless local loop transceiver 62. The PSTN 30 provides access to an internet service provider (ISP) 34, which provides access to the internet 36. A telephone 38, television 40, computer 42, printer 44 can all be connected to the home gateway system 20. In addition, appliances 46, lights 48 and sprinkling systems 50 can be connected to the home gateway system as part of the home automation features. A home security system 52 can also be connected to the home gateway system 20. This allows the home automation and security features to be integrated into the home communication system. For instance, the computer 42 can be used to setup times of day for the sprinkling system to turn on or the computer can print a report of the activities of the appliances or the security systems.

The transceiver 72 (see Figure 3) establishes a wireless local loop connection 74 with a base station 28. The transceiver 72 is connected to a switch 76. The switch 76 is connected to a voice bridge 77, a processor 78 and a router 80. The switch 76 also has a plurality of input lines 82. Telephones, facsimile machines and modems are among the devices that can be connected to the switch 76. The router 80 allows a user to establish a

local area network within his home. The router 80 in this embodiment is connected to a television processing system 82 and a home automation and security system 84. The processor 78 is connected to a smart card interface 86. The smart card interface is used as a keyless entry and to store certain home automation setups. A voice processing system 88 is connected to the processor 78. The voice processing system 88 includes voice verification and speech recognition capabilities. The voice verification capability is used for remote access to the home automation and security system or is used for keyless entry. A caller identification system 90 is connected to the processor 78. The caller identification system 90 can be used as part of a remote access screening.

The voice processing system (see Figure 4) contains a speech recognition system 100, a speaker verification system 102, a speech synthesis system 104 and a voice mail memory system 106. The control of the systems of the voice processing system 88 is performed in one embodiment by the processor 78. The processor 78 coordinates the voice system 100-106 to provide machine reception for remote access to the home security system. A request for access to a home automation and security features from a user at step 122 results in a speaker verification of the user at step 124. When the user is verified, the user is allowed access to the home automation and security features at step 126. At step 128, a voiced instruction is received.

In one embodiment, the step of receiving a request for access to the home automation and security features further includes inputting an electronic address of the home gateway system. Next, an electronic connection is established with the home gateway system. The user is then presented with a plurality of options including the home automation and security features. In one embodiment the step of entering the electronic

address, is performed by dialing a phone number. In another embodiment the electronic connection is a wireless local loop telephony connection.

In yet another embodiment the electronic connection is an internet connection and the user clicks on the home automation and security features option. The internet connection can be carried over the wireless local loop or over the cable TV link.

In one embodiment the speaker verification step further includes requesting a user to speak an access code. The access code is recognized using speech recognition. When the access code is valid and belongs to a set of approved access codes, a speaker verification is performed. When the speaker verification fails, the user is requested to enter a personal identification number. When the personal identification is valid, the user is allowed access to the home automation and security features. When the personal identification is not valid the user is denied access to the home automation and security features.

In a further embodiment the voiced instruction is recognized using the speech recognition system. The recognized instruction is converted into an electronic instruction that the home automation and security system can understand. The electronic instruction is then sent to the home automation and security controller.

The home security controller monitors a parameter at step 152. When the parameter exceeds a defined range, a message is sent containing an electronic address to a processor at step 154. A communication link to the electronic address is established over a wireless local loop at step 156. At step 158 the message is transmitted to the electronic address.

In one embodiment the parameter is a forceful entry signal and the message contains a police telephone number. In another embodiment a portion of the message is speech synthesized to form an audio message.

The audio message is transmitted to the electronic address. For instances, the audio message could include the street address of house and which sensor was tripped. In addition, the message could tell the police if the owners are home.

In another embodiment the message includes an internet address of the police. A message is sent to a police computer and includes the street address of house and which sensor was tripped. In yet another embodiment the parameters monitored can be an appliance. The data points for the parameter can be sent over the internet to the owner at a remote location.

## **VI. Issues**

1. Whether the standard for patentability is going to revert to the subjective standards of requiring a synergistic result or unexpected result or the standard is going to be that the prior art must suggest the invention to one skilled in the art when the invention and the prior art are view as a whole.

2. Whether claims 1-19 are unpatentable over Sizer, II, et al. (6,021,324) in view of Gorman (6,141,356) under 35 U.S.C. 103(a).

## **VII. Grouping Of Claims**

- 1) Claims 1, 3, 5, 6, 7, 15, 16 and 17 are grouped.
- 2) Claim 2 forms a group.
- 3) Claims 4, 5, 8, 9, 11, 12, 13 and 14 are grouped.
- 4) Claims 18 and 19 are grouped.



## VII. Argument

The essence of the case boils down to the correct standard for patentability or nonobviousness. The applicants do not assert that any of the elements of their invention are new. This is not required for nonobviousness see *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1 USPQ2d 1593, 1603 (Fed. Cir. 1987). The applicants do assert that the claims describe a unique combination of elements and connections that are not found in the prior art. The Examiner's response appears to be the elements are old and it would have been obvious to try the combination shown in the applicants' patent application or there is no synergy or unexpected results from the combination. The applicant does not suggest that the Examiner ever used the phrases "obvious to try", synergy or unexpected results, however this is the end result of the Examiner's reasoning. All of these standards have been rejected by the CAFC see *Gillette Co. v. S.C. Johnson & Son*, 919 F.2d 7120, 16 USPQ2d 1923 (Fed. Cir. 1990) and *Jervis B. Webb Co. v. Southern Sys., Inc.*, 742 F.2d 1388, 222 USPQ 943 (Fed. Cir. 1984). When the present application and the cited prior art are looked at as a whole there is no suggestion to create the system described in the applicants' claims, see *Medtronic, Inc. v. Cardiac Pacemakers, Inc.*, 721 F.2d 1563, 220 USPQ 97 (Fed. Cir. 1983).

The first group of claims (1, 3, 5, 6, 7, 15, 16 & 17) all require a home security controller capable of sending and receiving a message over a wireless local loop. The Examiner cites the combination of Sizer, II et al. and Gorman. Gorman is directed to a system for distributing low speed POTS (Plain Old Telephone Service) signals and high speed data signals throughout a house or small business. (See Abstract) Gorman shows a wireless local loop system 30. Sizer, II et al. shows a system for

controlling an appliance within a premise. Neither reference shows a home security controller as required by claims 1 & 15. Note claim 15 requires the steps performed by the home security controller. This element appears to be missing from both prior art references cited by the Examiner. There is a suggestion in Sizer, II, et al. for an automatic door lock, but this is not a home security controller. In addition, Sizer II, et al. does not have a separate home automation controller and home security controller as required by claim 1.

The question of obviousness requires that we determine if the references, taken as a whole, would suggest the invention to one of ordinary skill in the art. *Medtronic, Inc. v. Cardiac Pacemakers, Inc.*, 721 F.2d 1563, 220 USPQ 97 (Fed. Cir. 1983). The combination of Sizer, II, et al. and Gorman suggests a device for distributing both high-speed data service and low speed service (e.g., POTS) through a premise (Gorman Abstract) with a appliance control system that can work over a telephone line or a control channel (See Sizer, II, et al. col. 1-2, lines 60-67 & 1-2). The appliance control system would include a recording unit and wireless transmitter for generating and transmitting a packet of control information to a premise appliance (See Sizer, II, et al. col. 2, lines 3-15). Gorman suggests that the device might be used with a wireless local loop. The combination does not suggest a home security controller that is capable of sending and receiving messages over a wireless local loop or capable of communicating with the home automation controller. In addition, the combination does not suggest monitoring a parameter and sending a message over a wireless local loop if the parameter is exceeded.

The only way the Examiner can create the combination shown in the claims is to suggest that the applicants' invention was obvious to try, however this is impermissible see *Gillette Co. v. S.C. Johnson & Son*, 919

F.2d 7120, 16 USPQ2d 1923 (Fed. Cir. 1990). Thus the claims (1, 3, 6, 7, 15, 16 and 17) of group one are allowable over the prior art.

The second group of claims (2) includes a single claim to a smart card interface. The Examiner has rejected this claim upon official notice. The Examiner is not examining the invention as a whole but just pointing out that one of the elements is old. The CAFC has made it clear that this is impermissible. "The subject matter as whole" must be viewed to determine nonobviousness. *Richdel, Inc. v. Sunspool Corp*, 219 USPQ 8, 12 (CAFC 1983). As a result the Examiner's claim of Official Notice is irrelevant. The Examiner is just stating that each element taken separately is known (old). As clearly pointed out by the CAFC this tells us nothing about whether the invention as a whole is nonobvious. The Examiner has not shown that there is a suggestion or motivation to combine a smart card interface with the home gateway system of claim 1 (claim 2 depends from claim 1). Claim 2 is allowable.

The third group of claims (4, 5, 8, 9, 11, 12, 13 and 14) deal with speaker verification. Sizer, II, et al. do discuss a "voice recognition circuit 56" see (Col. 4-5, lines 59-67 & 1-15). However, it is only used for to respond to voice commands. As is clear from claim 4 the speaker verification module is part of the home security controller. The combination of Sizer, II, et al and Gorman suggests a voice recognition circuit for responding to voice commands to control an appliance. This combination does not suggest a speaker verification module as part of a home security controller. Nor does it suggest the more detailed steps of how the speaker verification method works as described in claim 12 & 13. The third group of claims is allowable over the prior art.

The fourth group of claims (18 & 19) require a home automation controller and a home security controller connected to the wireless local

loop transceiver and speaker verification (claim 19). The question of obviousness requires that we determine if the references, taken as a whole, would suggest the invention to one of ordinary skill in the art. *Medtronic, Inc. v. Cardiac Pacemakers, Inc.*, 721 F.2d 1563, 220 USPQ 97 (Fed. Cir. 1983). The combination of Sizer, II, et al. and Gorman suggest a device for distributing both high-speed data service and low speed service (e.g., POTS) through a premise (Gorman Abstract) with a appliance control system that can work over a telephone line or a control channel (See Sizer, II, et al. col. 1-2, lines 60-67 & 1-2). The appliance control system would include a recording unit and wireless transmitter for generating and transmitting a packet of control information to a premise appliance (See Sizer, II, et al. col. 2, lines 3-15). Gorman suggests that the device might be used with a wireless local loop. The combination does not suggest a home security controller that is capable of sending and receiving messages over a wireless local loop or capable of communicating with the home automation controller. In addition, the combination does not suggest speaker verification.

The only way the Examiner can create the combination shown in the claims is to suggest that the applicants' invention was obvious to try, however this is impermissible see *Gillette Co. v. S.C. Johnson & Son*, 919 F.2d 7120, 16 USPQ2d 1923 (Fed. Cir. 1990). Thus the claims (18 and 19) of group four are allowable over the prior art.

The Examiner's rejection of the claims is based on viewing the invention and the prior art as separate parts (steps) and not viewing the invention as a whole. See *Medtronic, Inc. v. Cardiac Pacemakers, Inc.*, 721 F.2d 1563, 220 USPQ 97 (Fed. Cir. 1983). The combination suggested by the prior art references does not lead to the applicants' invention as defined in the claims unless one uses impermissible hindsight. See

*Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1 USPQ2d 1593, 1603 (Fed. Cir. 1987). All four groups of claims are allowable.

## IX. Appendix Of The Appealed Claims

1. A home gateway system for home automation and security comprising:

a wireless local loop transceiver capable of establishing a wireless local loop point to point link to a geographically separated, non-mobile base station which is attached to the PSTN;

a home automation controller capable of sending and receiving a message with the wireless local loop transceiver; and

a home security controller capable of sending and receiving a message with the wireless local loop transceiver and the home automation controller.

2. The home gateway system of claim 1, further including a smart card interface capable of sending a plurality of instructions to the home automation controller.

3. The home gateway system of claim 1, further including a voice processing system coupled to the home security system.

4. The home gateway system of claim 3, wherein the voice processing system includes a speaker verification module.

5. The home gateway system of claim 3, wherein the voice processing system includes a speech recognition module.

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6. The home gateway system of claim 1, further including a switch connecting the wireless local loop telephony connection to the home security controller.

7. The home gateway system of claim 1, further including a plurality of sensors connected to the home security controller.

8. A method of operating a home gateway system for home automation and security, comprising the steps of:

(a) receiving a request for access to a home automation and security features from a user through a wireless local loop point to point link from a geographically separated non-mobile base station which is attached to the PSTN;

(b) performing a speaker verification of the user;

(c) when the user is verified, allowing the user access to the home automation and security features; and

(d) receiving a voiced instruction.

9. The method of claim 8, wherein step (a) further includes the steps of:

(a1) inputting an electronic address of the home gateway system by the user;

(a2) establishing an electronic connection with the home gateway system;

(a3) selecting the home automation and security features from a plurality of options.

10. The method of claim 9, wherein the step of inputting the electronic address includes the step of dialing a phone number.

11. The method of claim 9, wherein the step of establishing the electronic connection includes the step of setting up a wireless local loop telephony connection.

12. The method of claim 8, wherein step (b) further includes the steps of:

(b1) requesting a user to speak an access code;

(b2) performing a speech recognition on the access code;

(b3) when the access code is recognized and belongs to a set of approved access codes, performing a speaker verification;



13. The method of claim 12, further including the steps of:

(b4) when the speaker verification fails, requesting a user enter a personal identification number.

14. The method of claim 8, further including the steps of:

(e) performing a speech recognition of the voiced instruction;  
(f) converting the voiced instruction into an electronic instruction;  
(g) sending the electronic instruction to a home automation and security controller.

15. A method of operating a home gateway system for home automation and security, comprising the steps of:

(a) monitoring a parameter;  
(b) when the parameter exceeds a defined range, sending a message containing an electronic address to a processor;  
(c) establishing a communication link to the electronic address over a wireless local loop, wherein the wireless local loop point to point link is through a geographically separated non-mobile base station which is attached to the PSTN; and  
(d) transmitting the message to the electronic address.

16. The method of claim 15, wherein step (b) further includes the step of:

(b1) when the parameter is a forceful entry signal, sending the message that contains a police telephone number to the processor.

17. The method of claim 15, wherein step (d) further includes the step of:

(d1) speech synthesizing a portion of the message to form an audio message;

(d2) transmitting the audio message to the electronic address.

18. A home gateway system for home automation and security comprising:

a wireless local loop transceiver capable of establishing a wireless local loop point to point link to a geographically separated, non-mobile base station which is attached to the PSTN;

a switch connected to the wireless local loop transceiver;

a processor connected to the switch;

a voice processing system connected to the processor;

a router coupled to the switch;

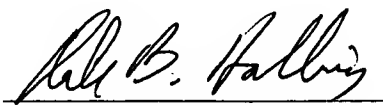
a home automation controller connected to the router; and

a home security controller connected to the router.

19. A method of operating a home gateway system for home automation and security, comprising the steps of:

- (a) dialing a telephone number of the home gateway system by a user;
- (b) establishing a wireless local loop connection with the home gateway system;
- (c) selecting a home automation and security features from a plurality of options;
- (d) performing a speaker verification of the user;
- (e) when the user is verified, allowing the user access to the home automation and security features;
- (f) receiving a voiced instruction to setup a home security controller in a warning mode;
- (g) monitoring a forceful entry signal;
- (h) when the forceful entry signal exceeds a defined range, sending a message containing a police telephone number to a processor;
- (i) establishing a communication link to the police telephone number over a wireless local loop; and
- (j) transmitting the message to the police telephone number.

Respectfully submitted,  
(Bennett et al.)

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